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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,916	09/18/2006	Asim Kumar Sarkar	294-231 PCT/US	4536
23869	7590	10/12/2007		
HOFFMANN & BARON, LLP 6900 JERICHO TURNPIKE SYOSSET, NY 11791			EXAMINER REDDY, KARUNA P	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 10/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,916	Applicant(s) SARKAR, ASIM KUMAR	
	Examiner Karuna P. Reddy	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/3/2006</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Preliminary amendment filed on October 13, 2005 is made of record. Applicant's election of group I, drawn to claims 1-9 and 15-16, is acknowledged. Claims 10-14, drawn to non-elected group II, are withdrawn from further consideration. Claims 1-16 are currently pending in the application.

Election/Restrictions

2. Applicant's election without traverse of group I, drawn to claims 1-9 and 15-16, in the reply filed on September 5, 2007 is acknowledged.

Therefore, the restriction is deemed proper and made FINAL.

Claim Objections

3. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In the present instance, claim 6 include salts of an azo-initiator while the dependent claim 7 includes, in the list, azo-initiators that are not salts.

4. Claim 8 is objected to because of the broad and narrow range/limitation in the same claim: The claim recites both a broad recitation of "100 to 10 kg" and a narrow limitation "1 g to 25 kg". Please make appropriate correction.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5, 8-9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay et al (US 3, 902, 596) in view of Duffield et al (US 2003/0108705 A1).

McVay et al disclose an additive package for holding additives, including an explosively decomposable polymerization initiator catalyst in a stabilizing

vehicle, which package is soluble in the resin formulation in which the additives are to be dissolved (column 1, lines 8-13). This is applicable to any resin formulation to which must be added an explosively decomposable polymerization initiator catalyst and which contains a component in which the material from which the package envelope is made is soluble (column 1, lines 21-27).

Explosively decomposable organic azo catalysts such as, for example, 2,2-azo(bis)isobutyronitrile, are also explosively decomposable polymerization initiator catalysts (column 2, lines 51-55). The formulation package of the invention is useable with any resin formulation, which contains one or more components in which the film of organic polymeric material will dissolve i.e. one or more "solvent components". The term "solvent component" is used to mean component of the formulation, which will dissolve the film (column 5, lines 14-20). A sheet of thin plastic film is held in place (column 5, lines 46-47). Additives including the sensitive catalyst and an inert stabilizing vehicle are placed inside the film envelope and the protruding flaps of the envelope are sealed (column 5, lines 59-64). Any suitable means such as twisting or folding, employing an adhesive or a tie cord may be used to seal the envelope (column 5, lines 66-67; column 6, lines 1-2).

McVay et al is silent with respect to a water-soluble container/package; container comprising at least one component selected from anti-foaming agent or diluent; amount of initiator in the container; and handling of the polymerization initiator system.

However, Duffield et al teaches water-soluble containers made of an injection molded polymer, for example, a poly(vinyl alcohol) and/or cellulose ether (paragraph 0011-0012). In order to ensure that the polymer such as poly(vinyl alcohol) or cellulose ether is capable of being injection molded, it is usual to incorporate plasticizers exemplified by glycols (paragraph 0041) and read on diluents of claim 9. Therefore, it would have been obvious to use a water-soluble container/package of Duffield et al, which is capable of being injection molded, because McVay contemplates using a package/container that is soluble in the resin formulation of reaction system and a known water-soluble container, that can be injection molded, would have been an obvious choice if the reaction is carried out in aqueous solution.

With respect to the amount of initiator, while neither reference elucidates that value, it is the examiner's position that initiator amount is a result-effective variable (MPEP 2144.5) since the amount used clearly affects the course of polymerization. Hence, the choice of a particular amount of initiator (such as the amount in present claims) is a matter of routine experimentation and would have been well within the skill level of one of ordinary skill in the art.

With respect to handling of the initiator in a water-soluble container, it is within the scope of a skilled artisan and is determined by logistics of the manufacturing site, absent evidence of criticality.

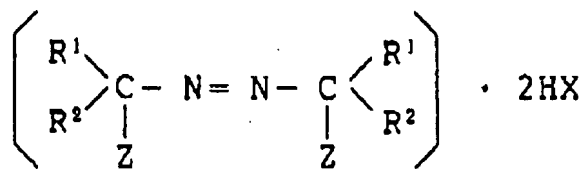
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8. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay et al (US 3, 902, 596) in view of Duffield et al (US 2003/0108705 A1) as applied to claim 1 above, and further in view of Amo et al (EP 0 668 098 A1).

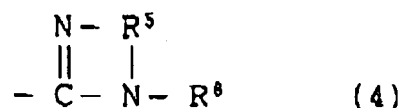
The discussion with respect to McVay et al in view of Duffield et al in paragraph 7 is incorporated here by reference.

The prior art differs with respect to the type of azo initiator.

However, Amo et al teach azo compounds, which are highly useful as radical polymerization initiators and are known by formula depicted below -



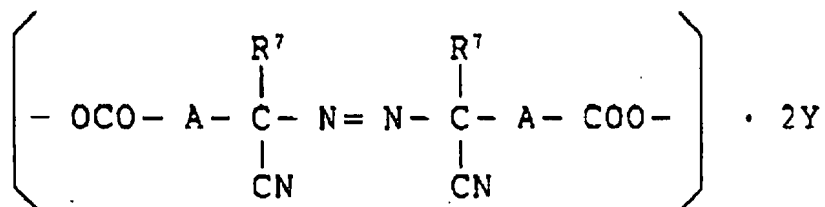
R¹ and R² are same or different and are each alkyl group or cycloalkyl group,
Z is a group represented by the formula (3) or formula (4)



R³ is hydrogen atom, alkyl, allyl, phenyl or substituted phenyl group,
R⁴ is hydrogen atom, alkyl, phenyl or substituted phenyl group,
R⁵ is alkylene or substituted alkylene group,

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R⁶ is hydrogen atom or hydroxyalkyl group,
 X is Cl, Br or CH₃COO- group



A is alkylene or substituted alkylene group,
 R⁷ is alkyl group,
 Y is alkali metal, alkaline earth metal (2Y) or NH₄.

See example 1 wherein 2, 2-azobisamidinopropane dihydrochloride is the azo polymerization initiator. Therefore, it would have been obvious to use 2, 2-azobisamidinopropane dihydrochloride because McVay et al generically disclose azo-initiators and Amo et al teach a species of the generically disclosed azo initiator and one of ordinary skill would have expected successful results for all embodiments falling within McVay et al's generic disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1114.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karuna P Reddy
Examiner
Art Unit 1796

/KR/

/Vasu Jagannathan/
Supervisory Patent Examiner
Technology Center 1700